Docket No.: 5364-0101PUS1 Page 3 of 20

Application No.: 10/588,753 Amendment dated August 18, 2010 Reply to Office Action of May 24, 2010

AMENDMENTS TO THE CLAIMS

1-24. (Canceled)

25. (Previously presented) A cleaning device for cleaning an edge portion of a board, the cleaning device comprising:

a brush having bristles that are at least partly surrounded by walls forming a cleaning case, the bristles being dimensioned to extend from a brush support portion so as to contact just the edge portion of said board when the edge portion of the board is positioned for cleaning so that the bristles remove dust attached to the edge portion of the board;

an ion injection device receiving a compressed gas and positioned to provide an ionized compressed gas flow directed toward the bristles of the brush when the bristles are in contact with the edge portion of the board to remove the dust attached to the edge portion of the board; and

a discharge opening in a wall of the cleaning case that receives dust removed by the bristles from the edge portion of the board.

26. (Previously presented) The cleaning device according to claim 25, wherein said discharge opening is provided with a discharge pipe portion leading away from the discharge opening for discharging the ionized gas and dust away from the cleaning case.

27. (Currently amended) The <u>A</u> cleaning device according to claim 26, further for cleaning an edge portion of a board, the cleaning device comprising:

a brush having bristles that are at least partly surrounded by walls forming a cleaning case, the bristles being dimensioned to extend from a brush support portion so as to contact just the edge portion of said board when the edge portion of the board is positioned for cleaning so that the bristles remove dust attached to the edge portion of the board;

an ion injection device receiving a compressed gas and positioned to provide an ionized compressed gas flow directed toward the bristles of the brush when the bristles are in contact with the edge portion of the board to remove the dust attached to the edge portion of the board;

Application No.: 10/588,753 Docket No.: 5364-0101PUS1 Amendment dated August 18, 2010

Reply to Office Action of May 24, 2010

a discharge opening in a wall of the cleaning case that receives dust removed by the bristles from the edge portion of the board, wherein said discharge opening is provided with a discharge pipe portion leading away from the discharge opening for discharging the ionized gas and dust away from the cleaning case; and

a source of compressed air having a nozzle member structured to emit compressed air so that the compressed air flows along a bottom portion of the cleaning case forming a receiving member extending toward the discharge opening so that dust collected on the receiving member is blown by the compressed air toward the discharge opening.

- 28. (Previously presented) The cleaning device according to claim 25, wherein the cleaning case has a gap having dimensions sized to permit entry of the edge portion of said board through the gap into the cleaning case to engage with the bristles of the brush.
- 29. (Previously presented) The cleaning device according to claim 25, further comprising a brush positioning device capable of adjusting the position of said brush support portion inside the cleaning case so that the bristles location inside the cleaning case can be adjusted.
- 30. (Previously presented) The cleaning device according to claim 25, wherein the bristles of the brush include conductive fibers.
- 31. (Previously presented) The cleaning device according to claim 28, wherein the ion injection device is positioned so that the ionized gas flows therefrom in a direction toward the gap through which the edge portion of the board is inserted into the cleaning case.
- 32. (Previously presented) A cleaning device for cleaning an edge portion of a board, comprising:
- a brush fixed in position inside a cleaning case having a gap through which the edge portion is inserted to position the edge portion inside the cleaning case;
- a drive mechanism structured to linearly drive the cleaning case with the fixed position brush in a direction parallel to a direction that the edge portion extends so that the linear movement of the cleaning case moves the fixed brush along the inserted edge portion of said

Page 4 of 20

Application No.: 10/588,753 Docket No.: 5364-0101PUS1
Amendment dated August 18, 2010 Page 5 of 20

Reply to Office Action of May 24, 2010

board for brushing the edge portion of said board to remove dust attached to the edge portion of

the board.

Claims33-34 (Canceled).

35. (Previously presented) A cleaning apparatus for cleaning an edge portion of a device, the

cleaning apparatus comprising:

a brush having brush hair that includes conductive fiber, the brush being supported so

that the brush hair that includes conductive fiber is at least partially surrounded by walls forming

a cleaning case with the brush hair that includes conductive fiber extending to a cleaning position

where said edge portion of the device will be contacted by the brush hair that includes

conductive fiber for removing dust attached to the edge portion of the device;

an ion injection device receiving a compressed gas and positioned to provide an ionized

flow of the compressed gas toward the brush hair that includes conductive fiber when the brush

hair that includes conductive fiber contacts the edge portion of the device at the cleaning

position; and

a discharge opening in a wall of the cleaning case that receives the dust removed by said

brush hair that includes conductive fiber to then discharge the dust away from the brush hair that

includes conductive fiber.

36. (Previously presented) The cleaning apparatus according to claim 35, further comprising a

brush positioning structure configured to adjust the position of said brush so that the brush hair

that includes conductive fiber is moved toward and away from contact with said edge portion of

the device at the cleaning position.

37. (Previously presented) The cleaning apparatus according to claim 35, wherein the brush

includes hair, further where the hair is positioned around a roller.

38. (Previously presented) The cleaning apparatus according to claim 35, further including a

nozzle member having an oblong injection orifice oriented to provide an air flow from the

oblong injection orifice toward the edge portion of the device at the cleaning position.

Application No.: 10/588,753
Amendment dated August 18, 2010

Reply to Office Action of May 24, 2010

Docket No.: 5364-0101PUS1

Page 6 of 20

Claims 39-46. (Canceled).

47. (Previously presented) The cleaning device according to claim 32, wherein the drive

mechanism includes a diving screw shaft.

48. (Currently Amended)) The cleaning device according to claim 47, wherein the cleaning case

includes a female screw unit interfaced with the diving driving screw shaft.